IMS DISTINGUISHED VISITOR LECTURE SERIES

Date, time and venue
27, 28 and 29 December 2022
3–5pm, GMT +8 (Singapore Time)
IMS Auditorium

Coulomb branches of 3d N=4 SUSY gauge theories and bow varieties

Hiraku Nakajima

In the first part of the minicourse, I will review the definition of Coulomb branches of gauge theories given in my joint work with Braverman and Finkelberg.

In the second part, I will focus on particular examples of gauge theories, called quiver gauge theories. Then I will review bow varieties, originally defined by Cherkis and further studied in my joint work with Takayama. They arise when the quiver is of affine type A.

Date, time and venue
5 January 2023 (Thursday)
9.30–10.30am, GMT +8 (Singapore Time)
IMS Auditorium

Coulomb branches of orthosymplectic quiver gauge theories

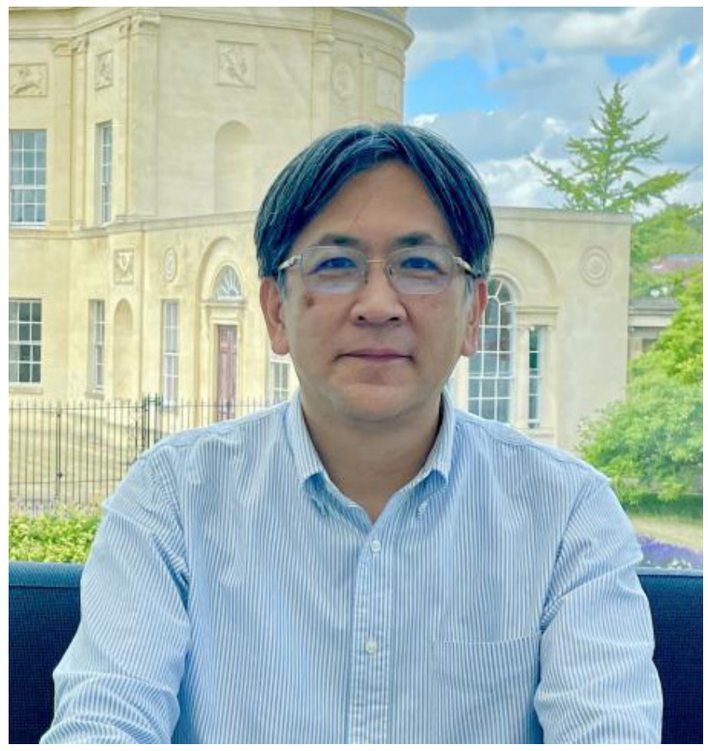
Hiraku Nakajima

Orthosymplectic quivers were used by Kraft-Procesi and later by myself to realize intersections of nilpotent orbits and slices to other orbits for classical groups as symplectic reduction, in other words as Higgs branches. We consider their Coulomb branches and identify them with orthosymplectic bow varieties. This is a joint work in progress with Hanany and Finkelberg.

The mini courses and talk are part of the program on
Representation Theory, Combinatorics and Geometry
(12 Dec 2022–7 Jan 2023)

Program webpage
https://tinyurl.com/RepTheoryDec2022

Registration
https://tinyurl.com/IMSRepTheoReg



(Photo credit: Yukari Ito)

Professor Hiraku Nakajima
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Professor Nakajima received his PhD from University of Tokyo. He was with Kyoto University (since 1997) before moving to professor and principal investigator at the Kavli Institute for the Physics and Mathematics of the Universe in 2018. Professor Nakajima will be the President of the International Mathematical Union (IMU) from 1 January 2023.

His awards include the Geometry Prize of the Mathematical Society of Japan (1997), Geometry Section; Spring Prize of the Mathematical Society of Japan (2000); Cole Prize of the American Mathematical Society (2003); JSPS Prize of the Japan Society for the Promotion of Science (2006); Japan Academy Prize (2014) and the Asahi Prize (2016). His research interests include representation theory and geometry.

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